

Summary: Impact Fee Facilities Plan

Sandy City, Utah, has retained TischlerBise to determine growth-related infrastructure needs and calculate impact fees for the following infrastructure categories:

- Parks and Recreation
- Fire
- Police
- Water
- Storm Water

The Impact Fee Facility Plan (IFFP) is a companion document to the City's Impact Fee Analysis Report, prepared for Sandy City, Utah. Whereas the Impact Fee Analysis report presents the technical analysis, assumptions and impact fee methodology, this Impact Fee Facilities Plan summarizes:

- Demands placed upon existing public facilities by new development
- The proposed means by which the City will meet these demands
- Funding source and cash flow analysis

Impact fees are one-time payments used to construct system improvements needed to accommodate new development. An impact fee represents new growth's fair share of capital facility needs. By law, impact fees can only be used for *capital* improvements, not operating or maintenance costs. Impact fees are subject to legal standards, which require fulfillment of three key elements: need, benefit, and proportionality. First, to justify a fee for public facilities, it must be demonstrated that new development will create a **need** for capital improvements. Second, new development must derive a **benefit** from the payment of the fees (i.e., in the form of public facilities constructed within a reasonable timeframe). Third, the fee paid by a particular type of development should not exceed its **proportionate** share of the capital cost for system improvements.

This summary provides information on projected residential and nonresidential growth as well as growth-related capital (infrastructure) improvements that are needed to maintain the City's current levels of service. Full detail is provided in the *Impact Fee Facilities Plan (2014)*.

GROWTH SUMMARY

A summary of growth projections for the City of Sandy is shown in Figure 1. Cumulative data are shown at the top and projected annual increases by type of development are shown at the bottom of the table. Both projected residential and nonresidential growth is shown below.

Figure 1. Annual Demographic Data

	5-Year Intervals														20-Year Net Increase
	2014 Base Yr	2015 1	2016 2	2017 3	2018 4	2019 5	2020 6	2021 7	2022 8	2023 9	2024 10	2029 15	2034 20		
Cumulative															
Population	90,347	91,424	92,501	93,577	94,654	95,731	96,807	97,884	98,961	100,037	101,114	106,497	111,880	21,533	
Jobs	42,672	43,533	44,394	45,255	46,116	46,977	47,838	48,699	49,560	50,421	51,282	55,587	59,892	17,220	
Housing Units	29,900	30,421	30,942	31,464	31,985	32,506	33,027	33,548	34,070	34,591	35,112	37,718	40,324	10,424	
Single Family Units	24,519	24,585	24,652	24,718	24,785	24,851	24,917	24,984	25,050	25,117	25,183	25,515	25,847	1,328	
Multifamily Units	5,381	5,836	6,291	6,745	7,200	7,655	8,110	8,565	9,019	9,474	9,929	12,203	14,477	9,096	
Jobs to Housing Ratio	1.43	1.43	1.43	1.44	1.44	1.45	1.45	1.45	1.45	1.46	1.46	1.47	1.49		
Nonres Sq Ft in thousands (KSF)															
Industrial	4,037	4,109	4,181	4,253	4,326	4,398	4,470	4,542	4,614	4,686	4,758	5,119	5,479		
Retail/ Restaurant	6,791	6,920	7,050	7,180	7,309	7,439	7,569	7,699	7,828	7,958	8,088	8,736	9,385		
Office/ Institutional	6,579	6,721	6,863	7,005	7,147	7,289	7,432	7,574	7,716	7,858	8,000	8,711	9,422		
Total	17,406	17,750	18,094	18,438	18,782	19,126	19,470	19,814	20,158	20,502	20,846	22,566	24,286		
Avg Sq Ft Per Job	408	408	408	407	407	407	407	407	407	407	407	406	406		
Nonres. Veh. Trips	142,578	145,383	148,188	150,993	153,798	156,603	159,409	162,214	165,019	167,824	170,629	184,655	198,681	56,103	
2012-2032															
Annual Increase		12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	Avg Anl
Population		1,077	1,077	1,077	1,077	1,077	1,077	1,077	1,077	1,077	1,077	1,077	1,077	1,077	1,077
Jobs		861	861	861	861	861	861	861	861	861	861	861	861	861	861
Housing Units		521	521	521	521	521	521	521	521	521	521	521	521	521	521
Industrial (1,000 SF)		72	72	72	72	72	72	72	72	72	72	72	72	72	72
Retail/ Restaurant (1,000 SF)		130	130	130	130	130	130	130	130	130	130	130	130	130	130
Office/ Institutional (1,000 SF)		142	142	142	142	142	142	142	142	142	142	142	142	142	142
		344	344	344	344	344	344	344	344	344	344	344	344	344	344

SUMMARY OF METHODOLOGIES AND COST COMPONENTS

Figure 2 summarizes the methodology used to derive each updated impact fee in Sandy, plus the infrastructure components and cost allocation approaches used to calculate the impact fees.

Figure 2. Proposed Impact Fees: Methodologies and Cost Components

<i>Type of Impact Fee</i>	<i>Cost Recovery (past)</i>	<i>Incremental Expansion (present)</i>	<i>Plan-Based (future)</i>	<i>Cost Allocation</i>
1a. Parks and Recreation		Park improvements	Park land acquisition	<i>Population</i>
1b. Trails		Trail expansion		<i>Population/Average Weekday Vehicle Trips</i>
2. Fire		Fire Station Space		<i>Calls for Service</i>
3. Police	Police Space			<i>Calls for Service</i>
4. Water	System Improvements for Supply and Distribution		System Improvements for Storage and Distribution	<i>Average Day Water Demand</i>
6. Storm Water	System Improvements		System Improvements	<i>Acreage</i>

IFFP SUMMARIES: LEVELS OF SERVICE AND FACILITY/IMPROVEMENT NEEDS

The following section provides a summary of IFFPs for each Sandy City infrastructure category included in the analysis.

PARKS AND RECREATION: Projected Need for Parks and Recreation Improvements

Figure 3 shows the need for additional growth-related parks and recreation infrastructure based on current levels of service standards and projected growth over the next ten years. It is projected that the City of Sandy will need to spend approximately \$6.5 million for park land acquisition, \$2.3 million for park improvements, \$2.4 million for site development of new city parks, and \$2.9 million for trail improvements.

Figure 3. Parks and Recreation Improvement Needs Analysis

Park Level of Service (LOS) Standards

Parks LOS	2.93 acres per 1,000 persons
Park Land Purchase Cost	\$650,000 per acre
Park Land Purchase Cost	\$604 per person
Park Improvements LOS	2.03 units per 1,000 persons
Park Improvements Cost	\$107,431 per unit
Park Infrastructure Cost	\$76,486 per acre
Trails Level of Service-Residential	2.97 linear feet per person
Trails Level of Service-Nonresidential	0.20 linear feet per nonres trip
Trails Cost	\$76 per linear foot

		Sandy Demand Factors		Infrastructure Needed			
		<i>Population</i>	<i>Nonres Vehicle Trips</i>	<i>Park Acres</i>	<i>Park Improvements</i>	<i>Linear Feet of Trails-Res</i>	<i>Linear Feet of Trails-Nonres</i>
Base	<i>Year</i>						
	2014	90,347	142,578	264.6	183	268,332	28,516
1	2015	91,424	145,383	267.8	186	271,529	29,077
2	2016	92,501	148,188	271.0	188	274,727	29,638
3	2017	93,577	150,993	274.2	190	277,925	30,199
4	2018	94,654	153,798	277.4	192	281,122	30,760
5	2019	95,731	156,603	280.6	194	284,320	31,321
6	2020	96,807	159,409	283.8	197	287,518	31,882
7	2021	97,884	162,214	287.0	199	290,715	32,443
8	2022	98,961	165,019	290.2	201	293,913	33,004
9	2023	100,037	167,824	293.4	203	297,111	33,565
10	2024	101,114	170,629	296.6	205	300,308	34,126
<i>10-Yr Increase</i>		10,767	28,052	32.0	22	31,976	5,610

Cost of Park Land	\$6,499,976
Cost of Park Improvements	\$2,348,020
Cost of Park Development/Infrastructure	\$2,447,552
Cost of Recreational Trail Improvements	\$2,856,536
TOTAL	\$14,152,084

FIRE: Projected Need for Fire Station Space

Figure 4 depicts projected demand for fire station space over the next ten years based on current levels of service. Demand from population and nonresidential growth will require 8,030 square feet of new fire station space for a total cost of \$1.9 million over the next ten years.

Figure 4. Fire Station Needs Analysis

Fire Level of Service (LOS) Standards

Fire Station - Residential	0.29 square feet per person
Fire Station - Nonresidential	0.57 square feet per job
Fire Station Cost	\$238 per square foot

		Sandy Demand Factors		Infrastructure Needed		
		<i>Population</i>	<i>Jobs</i>	<i>Fire SF Residential</i>	<i>Fire SF Nonresidential</i>	<i>TOTAL Station SF</i>
Base	2014	90,347	42,672	26,201	24,323	50,524
Year 1	2015	91,424	43,533	26,513	24,814	51,327
Year 2	2016	92,501	44,394	26,825	25,305	52,130
Year 3	2017	93,577	45,255	27,137	25,795	52,933
Year 4	2018	94,654	46,116	27,450	26,286	53,736
Year 5	2019	95,731	46,977	27,762	26,777	54,539
Year 6	2020	96,807	47,838	28,074	27,268	55,342
Year 7	2021	97,884	48,699	28,386	27,758	56,145
Year 8	2022	98,961	49,560	28,699	28,249	56,948
Year 9	2023	100,037	50,421	29,011	28,740	57,751
Year 10	2024	101,114	51,282	29,323	29,231	58,554
<i>10-Year Increase =></i>		10,767	8,610	3,122	4,908	8,030
<i>Total Growth-Related Cost of Fire Stations =></i>						\$1,911,141

POLICE: Projected Need for Police Station Space

Figure 5 depicts projected demand from growth for Police space. The City of Sandy recently purchased additional Police Station space. Based on current levels of service, the purchased space is anticipated to serve future growth to 2026. Demand from projected population and nonresidential growth will require 5,097 square feet of new law enforcement space for a total cost of \$672,770 by 2026. (Due to rounding in the calculations, the 12-year increase is slightly more than the purchased space (5,027 square feet) of the new facility.) New growth will benefit and therefore buy-in to the space already built.

Figure 5. Police Facility Needs Analysis

Police Level of Service (LOS) Standards

Police Building Space - Residential	0.16 Sq. Ft. per Person
Police Building Space - Nonresidential	0.09 Sq. Ft. per Nonres Trip
Police Buidling Cost per Sq. Ft.	\$132 per square foot

		Sandy Demand Factors		Infrastructure Needed		
		<i>Nonres</i>		<i>Police SF</i>	<i>Police SF</i>	<i>Total</i>
	<i>Year</i>	<i>Population</i>	<i>Vehicle Trips</i>	<i>Residential</i>	<i>Non Residential</i>	<i>Police SF</i>
Base	2014	90,347	142,578	14,456	12,832	27,288
Year 1	2015	91,424	145,383	14,628	13,084	27,712
Year 2	2016	92,501	148,188	14,800	13,337	28,137
Year 3	2017	93,577	150,993	14,972	13,589	28,562
Year 4	2018	94,654	153,798	15,145	13,842	28,986
Year 5	2019	95,731	156,603	15,317	14,094	29,411
Year 6	2020	96,807	159,409	15,489	14,347	29,836
Year 7	2021	97,884	162,214	15,661	14,599	30,261
Year 8	2022	98,961	165,019	15,834	14,852	30,685
Year 9	2023	100,037	167,824	16,006	15,104	31,110
Year 10	2024	101,114	170,629	16,178	15,357	31,535
Year 11	2025	102,191	173,434	16,350	15,609	31,960
Year 12	2026	103,267	176,240	16,523	15,862	32,384
<i>Increase =></i>		12,920	33,662	2,067	3,030	5,097
<i>Total Growth-Related Cost of Police Facilities =></i>						<i>\$672,770</i>

WATER: Projected Need for Water System Improvements

The level of service for water is based on gallons of water usage per person per day. The current level of service for residential development for water service is 609 gallons per residential customer per average day. For nonresidential connections, water demand averages 4,702 gallons per day per customer. Average daily use per capita is 202 gallons.

Figure 6: Existing Water Levels of Service

<i>Land Use Type</i>	<i>Gallons per Day*</i>	<i>Customers*</i>	<i>Gallons per Customer per Day</i>	<i>Gallons Per Day Per Capita^</i>
Residential	14,580,733	23,955	609	202
Nonresidential	5,656,231	1,203	4,702	
Total	20,236,964	25,158	804	

* North Star Utility Billing System, Sandy City, 2014

^ Gallons per day per capita based on weighted average persons per housing unit of 3.02

Sources: North Star Utility Billing System; City of Sandy; US Census

The Sandy Water Impact Fee Facilities Plan identifies projects that should be completed in the near-term based on the adopted *2010 Water Master Plan*, prepared by Bowen Collins and Associates, and supplemental technical memo on Central Business District Water impacts, prepared by Bowen Collins and Associates in 2011. Costs for completed projects with excess capacity are included as well where appropriate.

Water system infrastructure projects include improvements for (1) production, (2) distribution, and (3) storage. As shown in Figure 7 below, the grand total cost of the projects and debt service over the next 10 years is approximately \$17.8 million. The growth-related portion of these costs total approximately \$12 million.

Figure 7: Water System Impact Fee Facilities Plan

Project	Cost Recovery	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	Total Project Cost	% Growth	Growth Cost
Production														
Ontario Drain Tunnel (Debt Service)		\$1,006,729	\$1,014,554	\$1,016,457	\$1,017,092	\$1,017,472	\$1,019,799	\$1,024,874	\$1,024,028	\$1,038,620	\$1,029,806	\$10,209,433	100%	\$10,209,433
Storage														
One million gallons of additional storage for Zone 6	\$0	\$0	\$0	\$0	\$828,000	\$0	\$0	\$0	\$0	\$0	\$0	\$828,000	100%	\$828,000
Distribution														
Zone 5 Transmission Line and PRV Adjustments	\$1,681,315	\$0	\$919,450	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,600,765	3%	\$78,023
High Bench Booster Station	\$1,750,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,750,000	12%	\$210,000
MWDSLS Falcon Connection and Zone 3N Improvements	\$0	\$0	\$0	\$0	\$0	\$1,278,360	\$0	\$0	\$0	\$0	\$0	\$1,278,360	30%	\$383,508
Upsize/upgrade to 16-inch Water Main serving CBD	\$0	\$0	\$0	\$1,166,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,166,400	21%	\$244,944
SUBTOTAL	\$3,431,315	\$0	\$919,450	\$1,166,400	\$0	\$1,278,360	\$0	\$0	\$0	\$0	\$0	\$6,795,525		\$916,475
GRAND TOTAL	\$3,431,315	\$1,006,729	\$1,934,004	\$2,182,857	\$1,845,092	\$2,295,832	\$1,019,799	\$1,024,874	\$1,024,028	\$1,038,620	\$1,029,806	\$17,832,957		\$11,953,908

Sources: City of Sandy Public Utilities; Bowen Collins & Associates (Impact of CBD Development on Sandy City Water System, Dec. 8, 2011)

STORM WATER: Projected Need for Storm Water System Improvements

The City of Sandy updated its *Storm Water Master Plan and Rate Study* in 2009, which provides detailed descriptions of the existing conditions and levels of service of the City’s storm water system as well as future capacity needs in the short-term (5 years) and long-term (20 years). The City’s current storm water collection system serves approximately 25 square miles. Most storm water in the City is conveyed west through piping, irrigation canals, and ditches to the Jordan River. Major conveyances run from south to north with minor conveyances—mostly natural drainages—running east to west. The system includes over one million feet of piping and 23 detention basins (ponds).

The improvements identified in the Impact Fee Facilities Plan and accompanying Impact Fee Analysis Report are based on a modeling effort completed as part of the *2009 Storm Water Master Plan (SWMP)* and supplemental technical memorandum on the “Impact of Central Business District Development on Storm Water System” from December 2011, as well as discussions with and additional analysis by staff. The supplemental technical memorandum on CBD development provided two alternative plans to meet the storm water improvement needs brought about by the additional proposed development. The Impact Fee Facilities Plan is based on Alternative 2, detaining to 0.1 cfs (cubic feet per second) per acre or existing conditions. This was the lower cost alternative and costs have been updated to reflect current estimates.

Several citywide improvement projects are already completed and the growth-share is included as a cost-recovery component as new growth will benefit from those improvements. In addition, two growth-related projects are planned in the next ten years—Monroe Street and East Village improvements.

The Impact Fee Facilities Plan provides the total cost of storm water projects the City plans to use impact fees to fully or partially fund, including the cost recovery projects built to accommodate future growth. As Figure 8 indicates, the total cost of the IFFP projects is approximately \$23 million of which \$3.3 million reflects the growth-related portion of the plan.

Figure 8. Storm Water Impact Fee Facilities Plan

Timing	Project Name	Location	Total Cost	Growth Share	Growth Cost
Completed Projects					
Completed/Buy-in	114th South Storm Drain	114th South	\$483,840	10.0%	\$48,384
Completed/Buy-in	114th South Outfall	114th S	\$6,710,000	10.0%	\$671,000
Completed/Buy-in	8600 South	8600 South	\$8,842,591	5.6%	\$495,185
Completed/Buy-in	8000 South Phases 1 and 2	8000 South	\$4,082,566	2.1%	\$85,734
Completed/Buy-in	SE Quadrant	SE Quadrant	\$850,000	1.2%	\$10,200
<i>Subtotal</i>			\$20,968,997	6.2%	\$1,310,503
Planned Projects					
10-Yr	Monroe Street pipeline	Monroe St.	\$409,860	100%	\$409,860
10-Yr	East Village - Sego Lily Upsize and New	Sego Lily from Monroe St. to Detention Pond	\$1,559,175	100%	\$1,559,175
<i>Subtotal</i>			\$1,969,035	100.0%	\$1,969,035
GRAND TOTAL			\$22,938,032		\$3,279,538

Source: City of Sandy